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EXAMINER	
COLUCCI, MICHAEL C	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,640	MARTIN, SVEN C.	
	Examiner	Art Unit	
	MICHAEL C. COLUCCI	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _16 January 2009_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1 and 4-15_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1 and 4-15_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

NOTE: This action has **not** been made final due merely to recent court decisions regarding claims not being tied to a statutory class or transforming subject matter. See 35 U.S.C. 101 rejection below.

Response to Arguments

1. Applicants arguments with respect to claim 1 have been considered but are moot in view of the new grounds of rejection.

NOTE: Examiner would like to remind Applicant of the following:

"USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023,1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted "in view of the specification" without importing limitations from the specification into the claims unnecessarily). In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). See also In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) ("During patent examination the pending claims must be interpreted as broadly

as their terms reasonably allow.... The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.... An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process."). Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. Toro Co. v. White Consolidated Industries Inc., 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a "lexicographic vacuum, but in the context of the specification and drawings."). Any special meaning assigned to a term "must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention." Multiform Desiccants Inc. v. Medzam Ltd., 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998). See also MPEP § 2111.01."

Though the claim language is broad, Examiner has maintained the use of Brill et al. US 20020169596 A1 (hereinafter Brill) in view of Schabes et al. US 5537317 A (hereinafter Schabes), wherein the combination explicitly teaches the limitations of claims 1, 6, and 10. The scope of the claims in light of the specification appears to be drawn to finding a probability that a semantic tag is found for a sentence (i.e. a grammar is found for a sentence). The combination of Brill in view of Schabes explicitly teaches

the combination of semantic tags and phrases to form rules as described in the present invention (present invention spec. page 2). Further, the combination of Brill in view of Schabes explicitly teaches unsupervised learning like the present invention, wherein the present invention describes a semantic tag assigned to a phase to allow the learning of a grammar (present invention spec. page 4). For instance, Schabes teaches past limitations and an improvement upon them, wherein Schabes teaches that in the past, in order to ascertain proper usage, the grammaticality of a sentence was computed as the probability of this sentence to occur in English. Such statistical approach assigns high probability to grammatically correct sentences, and low probability to ungrammatical sentences. The statistical is obtained by training on a collection of English sentences, or a training corpus. The corpus defines correct usage. As a result, when a sentence is typed in to such a grammar checking system, the probability of the entire sentence correlating with the corpus is computed. It will be appreciated in order to entertain the entire English vocabulary, about 60,000 words, a corpus of at several hundred trillion words must be used. Furthermore, a comparable number of probabilities must be stored on the computer. Thus the task of analyzing entire sentences is both computationally and storage intensive. In order to establish correct usage in the Subject System, it is the probability of a sequence of parts of speech which is derived. For this purpose, one can consider that there are between 100 and 400 possible parts of speech depending how sophisticated the system is to be. This translates to a several million word training corpus as opposed to several hundred trillion. This type of analysis can be easily performed on standard computing platforms

including the ones used for word processing. Thus in the subject system, a sentence is first broken up into parts of speech. For instance, the sentence "I heard this band play" is analyzed as follows: PRONOUN, VERB, DETERMINER, NOUN, VERB. The probability of this part of speech sequence, is determined by comparing the sequence to the corpus. This is also not feasible unless one merely consider the so-called tri-grams. Tri-grams are triple of parts of speech which are adjacent in the input sentence. Analyzing three adjacent parts of speech is usually sufficient to establish correctness; and it the probability of these tri-grams which is utilized to establish that a particular sentence involves correct usage. Thus rather than checking the entire sentence, the probability of three adjacent parts of speech is computed from the training corpus (Schabes Col. 8 lines 13-51).

Further, Schabes teaches that the entries of a dictionary are selected and ranked based on the part of speech assigned to the given word in context. The entries corresponding to the word in context are first selected. The other entries not relevant to the current context are still available at the request of the user. The part of speech of the given word in context is disambiguated with the part of speech tagger described above. By way of illustration, assuming the word "left" in the sentence "He left a minute ago", the part of speech tagger assigns the tag "verb past tense" for the word "left" in that sentence. For this case, the Subject System selects the entries for the verb "leave" corresponding to the usage of "left" in that context and then selects the entries for "left" not used in that context, in particular the ones for "left" as an adjective, as an adverb and as a noun (Schabes Col. 24 lines 45-60).

Examiner has provided the new grounds of rejection below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 6-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. A “computer readable medium” is not positively defined in the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 4 recites the limitation "the statistical procedure" in. There is insufficient antecedent basis for this limitation in the claim, wherein claim 1 contains <u>canceled</u> support for this limitation.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 4, and 5 are rejected under 35 U.S.C. 101 because:

Claims 1,4, and 5 do not fall within one of the four statutory categories of invention. Supreme Court precedent[1] and recent Federal Circuit decisions[2] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

Claims 1,4, and 5 recite purely mental steps and would not qualify as a statutory process. In order to qualify as a statutory process, the method claim should positively recite the other statutory class to which it is tied (i.e. apparatus, device, product, etc.). For example, the method steps of claim 1 appear to recite mental steps such as "extracting a phrase…calculating a probability…mapping" and do not identify an apparatus that performs the recited method steps, such as a device, computer,

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[1] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

[2] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

apparatus, hardware, etc. Examiner can not find any support in the specification of the present invention to provide an example as to overcome this issue.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1 and 4-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brill et al. US 20020169596 A1 (hereinafter Brill) in view of Schabes et al. US 5537317 A (hereinafter Schabes).

Re claim 1, Brill teaches a method, comprising:

extracting a phrase from a training corpus ([0021], semantic interpreter analyzing sentences from a corpus);

calculating a probability that the phrase is mapped to a semantic tag ([0025], semantic interpreter mapping components) from a list of unordered semantic tags;

mapping the phrase to the semantic tag ([0033-0034], highest score for learning set) with the highest mapping probability ([0028] maximization algorithm);

generating a mapping table containing the phrase and its corresponding semantic tag ([0025], semantic interpreter mapping components)

However Brill fails to teach calculating a probability from a list of unordered semantic tags

Schabes teaches past limitations and an improvement upon them, wherein Schabes teaches that in the past, in order to ascertain proper usage, the grammaticality of a sentence was computed as the probability of this sentence to occur in English. Such statistical approach assigns high probability to grammatically correct sentences, and low probability to ungrammatical sentences. The statistical is obtained by training on a collection of English sentences, or a training corpus. The corpus defines correct usage. As a result, when a sentence is typed in to such a grammar checking system, the probability of the entire sentence correlating with the corpus is computed. It will be appreciated in order to entertain the entire English vocabulary, about 60,000 words, a corpus of at several hundred trillion words must be used. Furthermore, a comparable number of probabilities must be stored on the computer. Thus the task of analyzing entire sentences is both computationally and storage intensive. In order to establish correct usage in the Subject System, it is the probability of a sequence of parts of speech which is derived. For this purpose, one can consider that there are between 100 and 400 possible parts of speech depending how sophisticated the system is to be. This translates to a several million word training corpus as opposed to several hundred trillion. This type of analysis can be easily performed on standard computing platforms including the ones used for word processing. Thus in the subject system, a sentence is first broken up into parts of speech. For instance, the sentence "I heard this band play" is analyzed as follows: PRONOUN, VERB, DETERMINER, NOUN, VERB. The

probability of this part of speech sequence, is determined by comparing the sequence to the corpus. This is also not feasible unless one merely consider the so-called tri-grams. Tri-grams are triple of parts of speech which are adjacent in the input sentence. Analyzing three adjacent parts of speech is usually sufficient to establish correctness; and it the probability of these tri-grams which is utilized to establish that a particular sentence involves correct usage. Thus rather than checking the entire sentence, the probability of three adjacent parts of speech is computed from the training corpus (Schabes Col. 8 lines 13-51).

Further, Schabes teaches that the entries of a dictionary are selected and ranked based on the part of speech assigned to the given word in context. The entries corresponding to the word in context are first selected. The other entries not relevant to the current context are still available at the request of the user. The part of speech of the given word in context is disambiguated with the part of speech tagger described above. By way of illustration, assuming the word "left" in the sentence "He left a minute ago", the part of speech tagger assigns the tag "verb past tense" for the word "left" in that sentence. For this case, the Subject System selects the entries for the verb "leave" corresponding to the usage of "left" in that context and then selects the entries for "left" not used in that context, in particular the ones for "left" as an adjective, as an adverb and as a noun (Schabes Col. 24 lines 45-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Brill to incorporate calculating a probability that the phrase is mapped to a semantic tag from a list of unordered semantic tags as

taught by Schabes to allow for the tagging of semantic portions of a sentence (such as parts of speech) in order to prioritize (i.e. the best ranking/probability) semantic tags within a sentence to maintain the proper context based on adjacent tags in a sentence (Schabes Col. 24 lines 45-60).

Re claims 6, and 11, Brill teaches a computer readable storage medium including a set of instructions executable by a processor, the set of instructions operable to:

calculate a mapping probability that a semantic tag of a set of candidate semantic tags is assigned to a phrase ([0025]), wherein the calculation of the mapping probability is performed by means of a statistical procedure based on a set of phrases constituting a corpus of sentences ([0024]), each of the phrases having assigned a set of candidate semantic tags ([0028]).

generate a mapping table from the performed mapping ([0035])

However, Brill fails to teach mapping probability that is performed by means of a statistical procedure based on a set of phrases

Schabes teaches well known previous techniques, wherein in the past, in order to ascertain proper usage, the grammaticality of a sentence was computed as the probability of this sentence to occur in English. Such statistical approach assigns high probability to grammatically correct sentences, and low probability to ungrammatical sentences. The statistical is obtained by training on a collection of English sentences, or a training corpus. The corpus defines correct usage. As a result, when a sentence is typed in to such a grammar checking system, the probability of the entire sentence

correlating with the corpus is computed. It will be appreciated in order to entertain the entire English vocabulary, about 60,000 words, a corpus of at several hundred trillion words must be used. Furthermore, a comparable number of probabilities must be stored on the computer. Thus the task of analyzing entire sentences is both computationally and storage intensive (Schabes Col. 8 lines 12-28).

Further, Schabes overcomes previous techniques, wherein rather than comparing the above mentioned probabilities, in a preferred embodiment, the subject system compares the geometric average of these probabilities by taking into account their word lengths, i.e. by comparing the logarithm of P1 divided by the number of words in S1, and the logarithm of P2 divided by the number of words in S2. This is important in cases where a single word may be confused with a sequence of words such as "maybe" and "may be". Directly comparing the probabilities of the part of speech sequences would favor shorter sentences instead of longer sentences, an not necessarily correct result, since the statistical language model assigns lower probabilities to longer sentences (Schabes Col. 9 lines 55-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Brill to incorporate mapping probability that is performed by means of a statistical procedure based on a set of phrases as taught by Schabes to allow for the recognition of parts of speech and individual in addition to the identification of sentences/phrases, wherein higher/lower probabilities are assigned to sentences and the length of the sentences in an unsupervised or even supervised system (Schabes Col. 9 lines 55-67).

Re claims 7 and 12, Brill teaches the method according to claim I, for each phrase further comprising calculating a set of mapping probabilities ([0025]), providing the probability for each semantic tag of the set of candidate semantic tags being assigned to the phrase ([0028]).

However, Brill fails to teach providing the probability for each semantic tag of the set of candidate semantic tags

Schabes teaches well known previous techniques, wherein in the past, in order to ascertain proper usage, the grammaticality of a sentence was computed as the probability of this sentence to occur in English. Such statistical approach assigns high probability to grammatically correct sentences, and low probability to ungrammatical sentences. The statistical is obtained by training on a collection of English sentences, or a training corpus. The corpus defines correct usage. As a result, when a sentence is typed in to such a grammar checking system, the probability of the entire sentence correlating with the corpus is computed. It will be appreciated in order to entertain the entire English vocabulary, about 60,000 words, a corpus of at several hundred trillion words must be used. Furthermore, a comparable number of probabilities must be stored on the computer. Thus the task of analyzing entire sentences is both computationally and storage intensive (Schabes Col. 8 lines 12-28).

Further, Schabes overcomes previous techniques, wherein rather than comparing the above mentioned probabilities, in a preferred embodiment, the subject system compares the geometric average of these probabilities by taking into account

their word lengths, i.e. by comparing the logarithm of P1 divided by the number of words in S1, and the logarithm of P2 divided by the number of words in S2. This is important in cases where a single word may be confused with a sequence of words such as "maybe" and "may be". Directly comparing the probabilities of the part of speech sequences would favor shorter sentences instead of longer sentences, an not necessarily correct result, since the statistical language model assigns lower probabilities to longer sentences (Schabes Col. 9 lines 55-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Brill to incorporate the probability for each semantic tag of the set of candidate semantic tags as taught by Schabes to allow for the recognition of parts of speech and individual in addition to the identification of sentences/phrases, wherein higher/lower probabilities are assigned to sentences and the length of the sentences in an unsupervised or even supervised system (Schabes Col. 9 lines 55-67).

Re claims 8 and 13, Brill teaches the method according to claim 2, further comprising determining one semantic tag of the set of candidate semantic tags ([0025]) having the highest mapping probability of the set of mapping probabilities and mapping the one semantic tag to the phrase ([0024])

However, Brill fails to teach determining one semantic tag of the set of candidate semantic tags having the highest mapping probability

Schabes teaches well known previous techniques, wherein in the past, in order to ascertain proper usage, the grammaticality of a sentence was computed as the probability of this sentence to occur in English. Such statistical approach assigns high probability to grammatically correct sentences, and low probability to ungrammatical sentences. The statistical is obtained by training on a collection of English sentences, or a training corpus. The corpus defines correct usage. As a result, when a sentence is typed in to such a grammar checking system, the probability of the entire sentence correlating with the corpus is computed. It will be appreciated in order to entertain the entire English vocabulary, about 60,000 words, a corpus of at several hundred trillion words must be used. Furthermore, a comparable number of probabilities must be stored on the computer. Thus the task of analyzing entire sentences is both computationally and storage intensive (Schabes Col. 8 lines 12-28).

Further, Schabes overcomes previous techniques, wherein rather than comparing the above mentioned probabilities, in a preferred embodiment, the subject system compares the geometric average of these probabilities by taking into account their word lengths, i.e. by comparing the logarithm of P1 divided by the number of words in S1, and the logarithm of P2 divided by the number of words in S2. This is important in cases where a single word may be confused with a sequence of words such as "maybe" and "may be". Directly comparing the probabilities of the part of speech sequences would favor shorter sentences instead of longer sentences, an not necessarily correct result, since the statistical language model assigns lower probabilities to longer sentences (Schabes Col. 9 lines 55-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Brill to incorporate the probability for each semantic tag of the set of candidate semantic tags as taught by Schabes to allow for the recognition of parts of speech and individual in addition to the identification of sentences/phrases, wherein higher/lower probabilities are assigned to sentences and the length of the sentences in an unsupervised or even supervised system (Schabes Col. 9 lines 55-67).

Re claims 4, 9, and 14, Brill teaches the method according to claim 1, wherein the statistical procedure comprises an expectation maximization algorithm ([0028]).

Re claims 5, 10, and 15, Brill teaches the method according to claim 3 or 4, further comprising storing of performed mappings between a candidate semantic tag ([0025]) and a phrase in form of a mapping table ([0024]) in order to derive a grammar being applicable to unknown sentences or unknown phrases.

However, Brill fails to teach deriving a grammar being applicable to unknown sentences or unknown phrases

Schabes teaches well known previous techniques, wherein in the past, in order to ascertain proper usage, the grammaticality of a sentence was computed as the probability of this sentence to occur in English. Such statistical approach assigns high probability to grammatically correct sentences, and low probability to ungrammatical sentences. The statistical is obtained by training on a collection of English sentences,

or a training corpus. The corpus defines correct usage. As a result, when a sentence is typed in to such a grammar checking system, the probability of the entire sentence correlating with the corpus is computed. It will be appreciated in order to entertain the entire English vocabulary, about 60,000 words, a corpus of at several hundred trillion words must be used. Furthermore, a comparable number of probabilities must be stored on the computer. Thus the task of analyzing entire sentences is both computationally and storage intensive (Schabes Col. 8 lines 12-28).

Further, Schabes overcomes previous techniques, wherein rather than comparing the above mentioned probabilities, in a preferred embodiment, the subject system compares the geometric average of these probabilities by taking into account their word lengths, i.e. by comparing the logarithm of P1 divided by the number of words in S1, and the logarithm of P2 divided by the number of words in S2. This is important in cases where a single word may be confused with a sequence of words such as "maybe" and "may be". Directly comparing the probabilities of the part of speech sequences would favor shorter sentences instead of longer sentences, an not necessarily correct result, since the statistical language model assigns lower probabilities to longer sentences (Schabes Col. 9 lines 55-67).

Furthermore, Schabes teaches that in particular importance in grammar checking is the ability to detect the sequence of parts of speech as they exist in a given sentence. Correct sentences will have parts of speech which follow a normal sequence, such that by analyzing the parts of speech sequence one can detect the probability that the sentence is correct in terms of its grammar. While prior art systems have tagged a

sentence for parts of speech and have analyzed the sequences of parts of speech for the above mentioned probability, these probability have never been utilized in grammar checking and correcting system (Schabes Col. 3 lines 14-25 & Fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Brill to incorporate deriving a grammar being applicable to unknown sentences or unknown phrases as taught by Schabes to allow for the analysis of any input, particularly in any language and being able to not only translate but interpret the semantic and syntactic structure of discourse, wherein probabilities that check if grammar is correct based on a sequential sentence input (Schabes Col. 3 lines 14-25 & Fig. 1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Colucci whose telephone number is (571)-270-1847. The examiner can normally be reached on 9:30 am - 6:00 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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